

**METHOD AND APPARATUS FOR CONTROLLING CURRENT  
DEMAND IN AN INTEGRATED CIRCUIT**

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Abstract of the Disclosure

10 The present invention relates generally methods and apparatus for  
controlling current demand in an integrated circuit. One embodiment relates to  
a method that includes detecting if a supply voltage overshoot or a undershoot  
is present or anticipated, and if detected, controlling current consumed by a  
power consumption circuitry to ensure that the power supply voltage remains  
within acceptable levels. Other embodiments relate to an integrated circuit  
having a capacitive decoupling structure, power consumption circuitry, and  
power consumption control circuitry for controlling current consumed by at  
15 least a portion of the power consumption circuitry. Therefore, embodiments of  
the invention relate to monitoring and controlling power consumption (i.e.  
current demand) of a power consumption circuit (such as an integrated circuit)  
in order to prevent devastating supply voltage undershoots, overshoots, and  
oscillations.

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